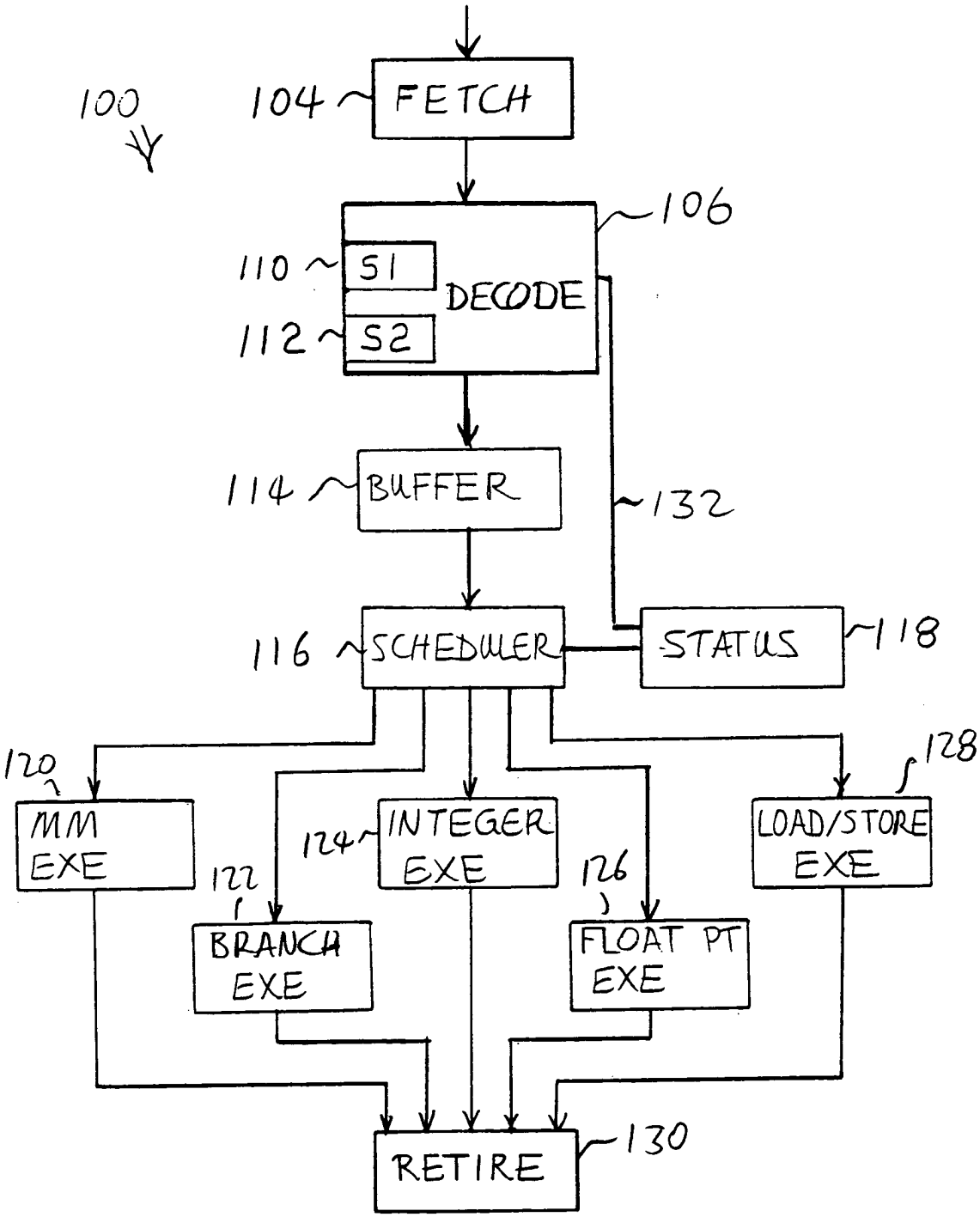

100
104
FETCH
106
110
S1
DECODE
112
S2
114
BUFFER
132
116
SCHEDULER
STATUS
118
120
MM EXE
122
BRANCH EXE
124
INTEGER EXE
126
FLOAT PT EXE
128
LOAD/STORE EXE
RETIRE
130

FIGURE 1

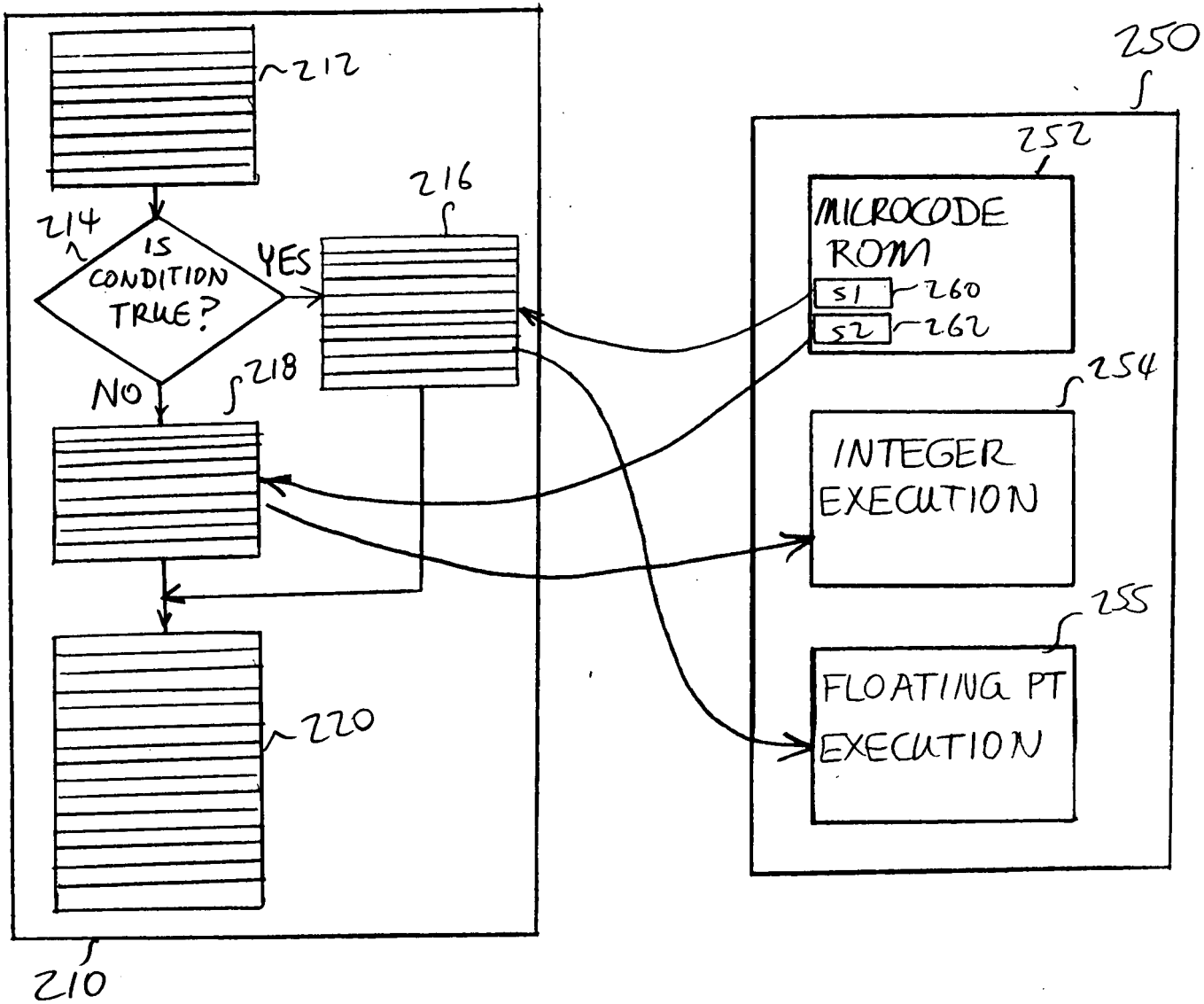

212
214
IS CONDITION TRUE?
YES
216
NO
218
220
210
250
252
MICROCODE ROM
S1
260
S2
262
254
INTEGER EXECUTION
255
FLOATING PT EXECUTION

FIGURE 2

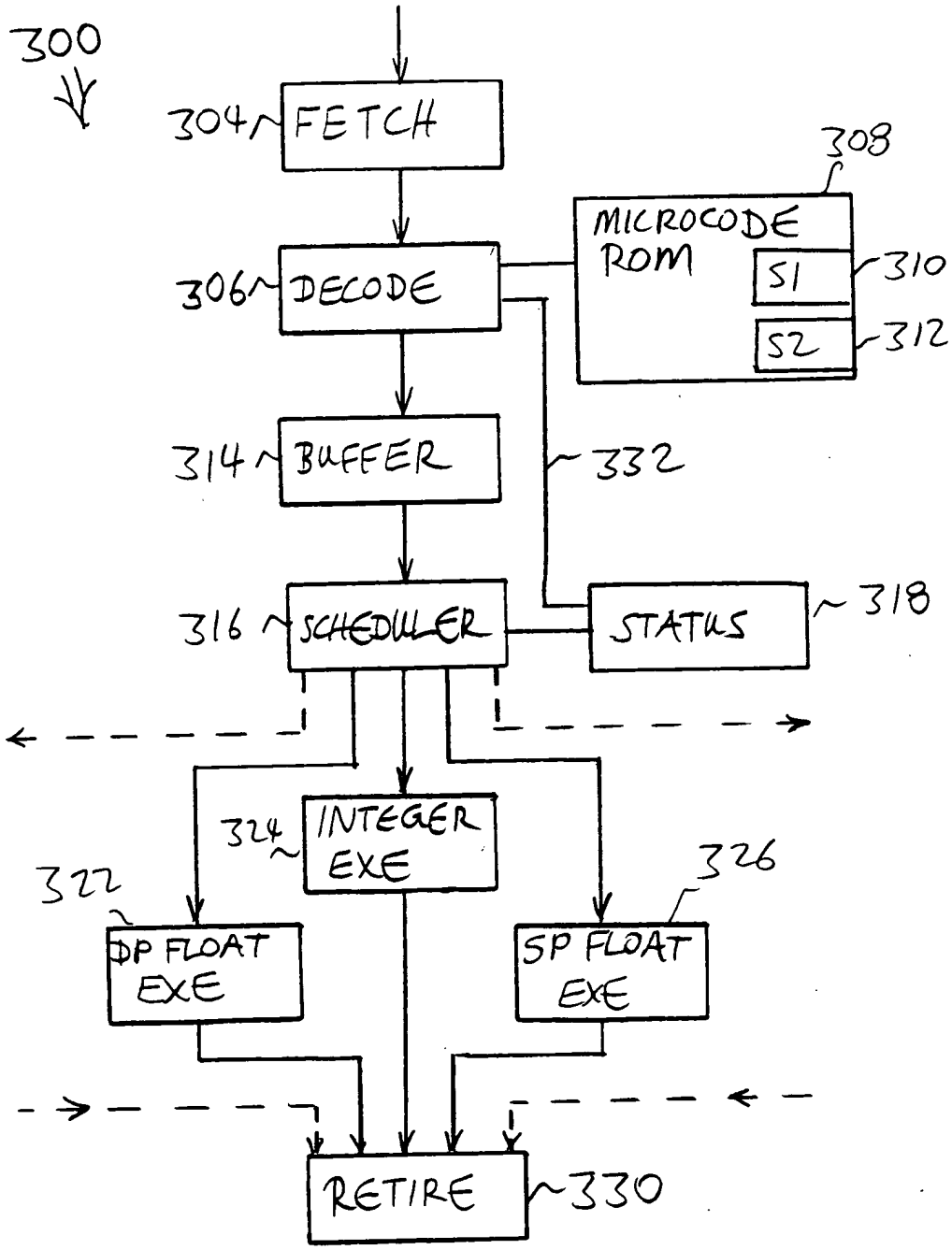
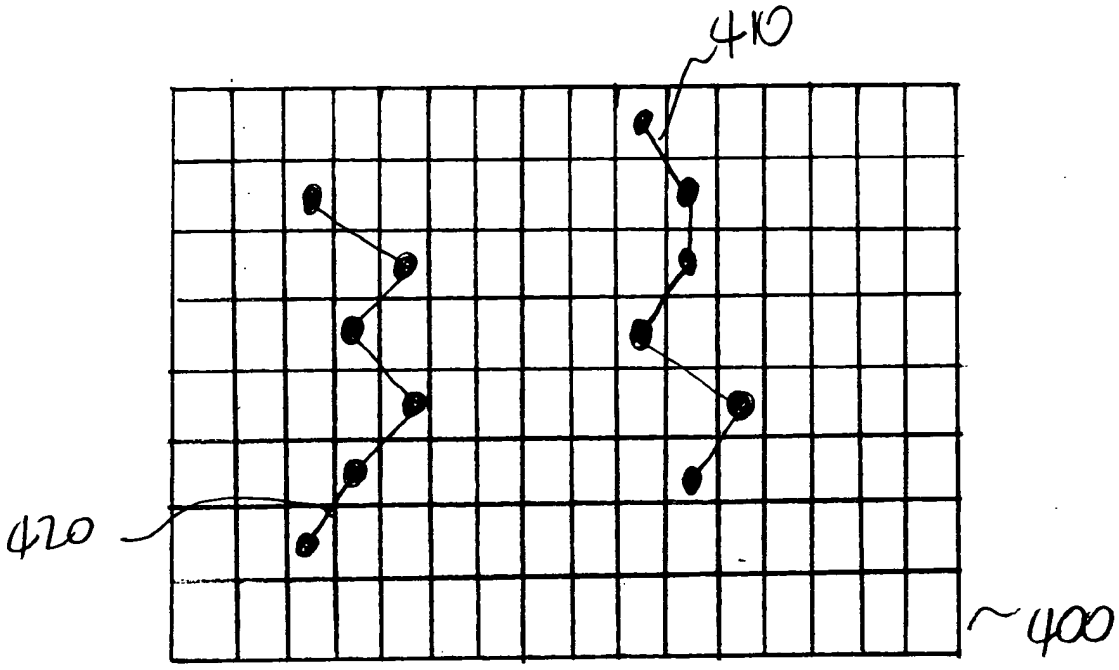

300
304
FETCH
308
MICROCODE ROM
S1
S2
310
312
306
DECODE
314
BUFFER
332
316
SCHEDULER
STATUS
318
324
INTEGER EXE
322
DP FLOAT EXE
326
SP FLOAT EXE
RETIRE
330

FIGURE 3



TRACE CACHE

FIGURE 4

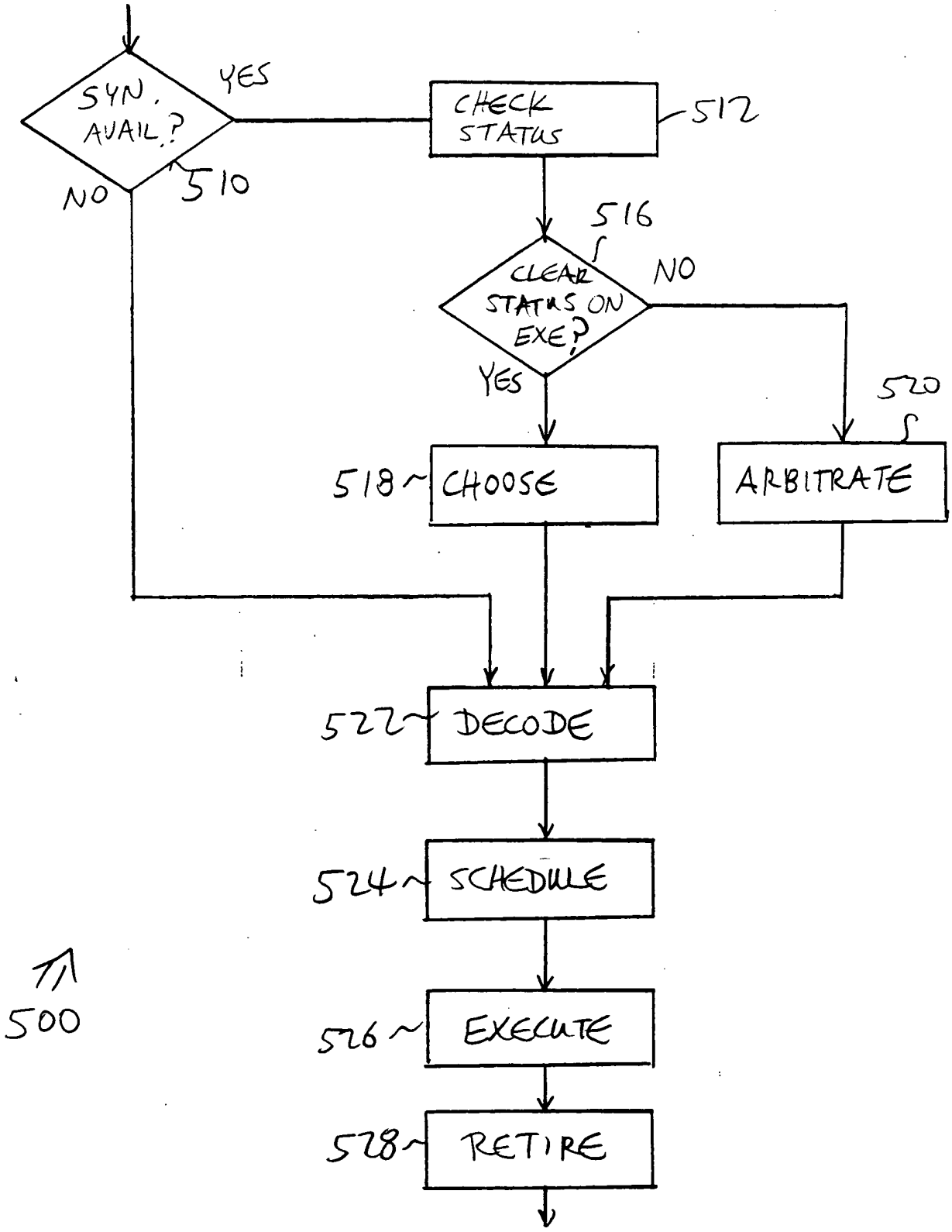

SYN. AVAIL.?
YES
NO
510
CHECK STATUS
512
516
CLEAR STATUS ON EXE?
NO
YES
520
518
CHOOSE
ARBITRATE
522
DECODE
524
SCHEDULE
526
EXECUTE
528
RETIRE
500

FIGURE 5

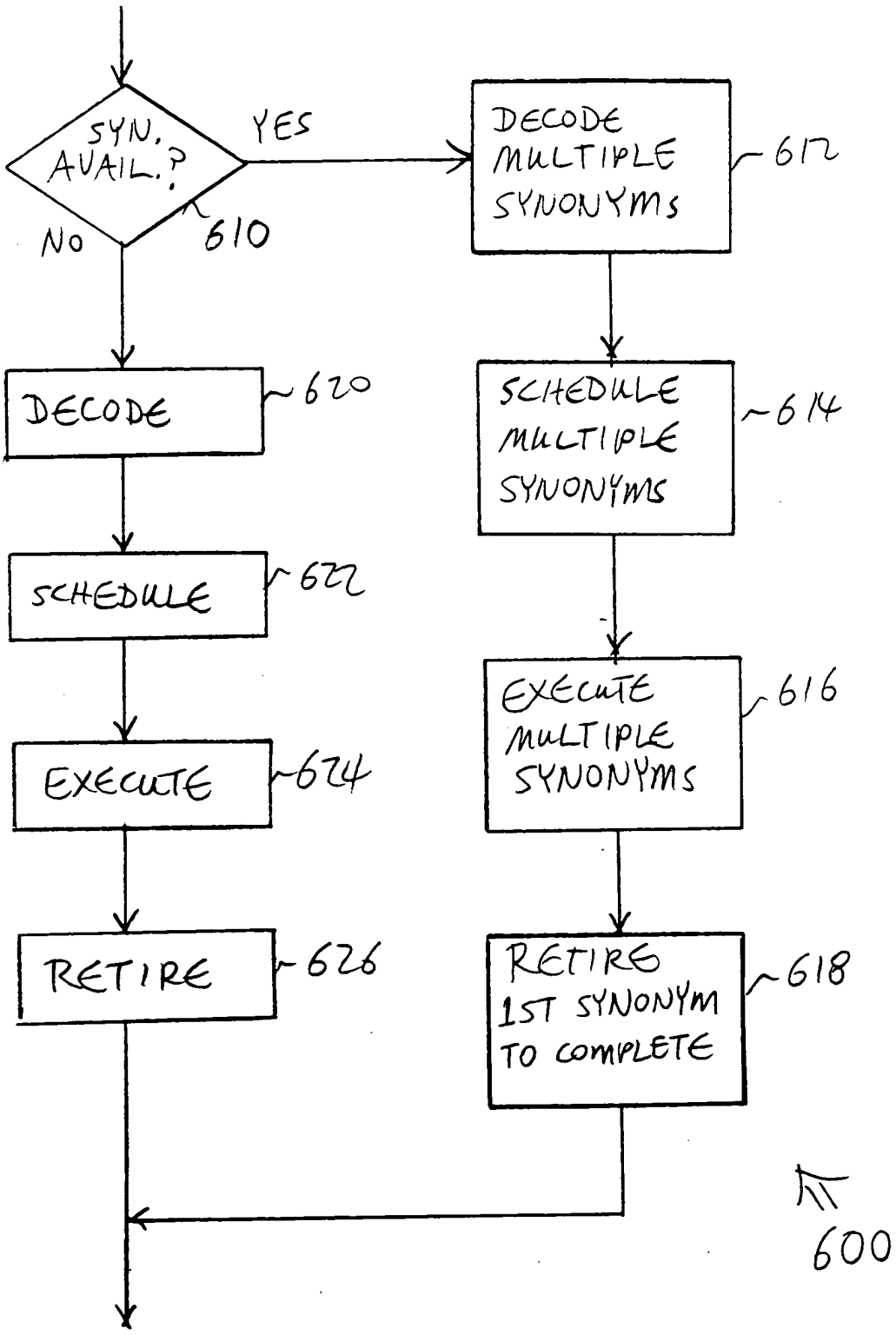

SYN. AVAIL.?
YES
No
610
DECODE MULTIPLE SYNONYMS
612
DECODE
620
SCHEDULE MULTIPLE SYNONYMS
614
SCHEDULE
622
EXECUTE MULTIPLE SYNONYMS
616
EXECUTE
624
RETIRE
626
RETIRE 1ST SYNONYM TO COMPLETE
618
600

FIGURE 6

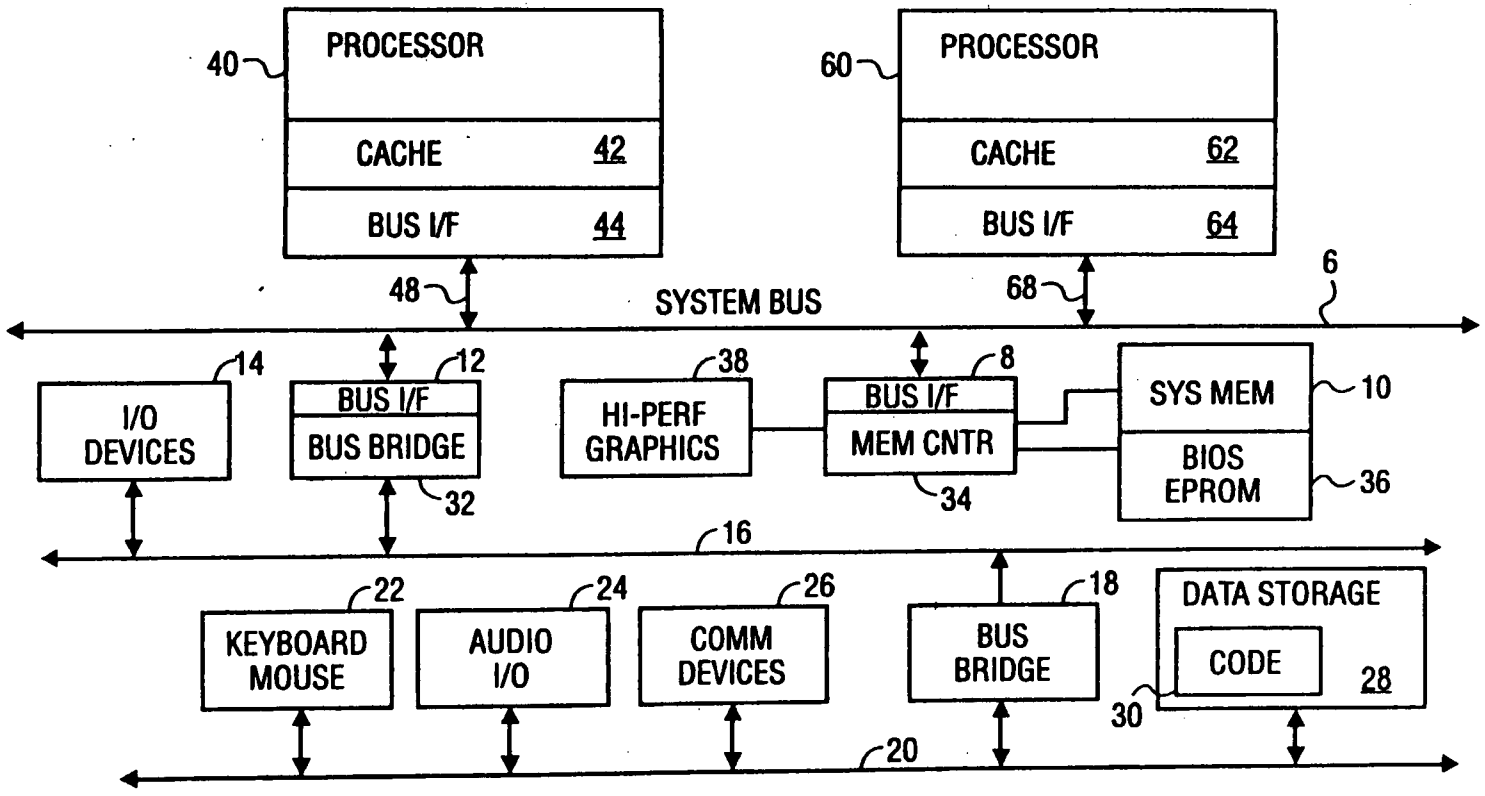

PROCESSOR
40
CACHE
42
BUS I/F
44
PROCESSOR
60
CACHE
62
BUS I/F
64
48
SYSTEM BUS
68
6
14
I/O DEVICES
12
BUS I/F
BUS BRIDGE
32
38
HI-PERF GRAPHICS
8
BUS I/F
MEM CNTR
34
SYS MEM
10
BIOS EPROM
36
16
22
KEYBOARD MOUSE
24
AUDIO I/O
26
COMM DEVICES
18
BUS BRIDGE
DATA STORAGE
CODE
28
30
20

FIG. 7A

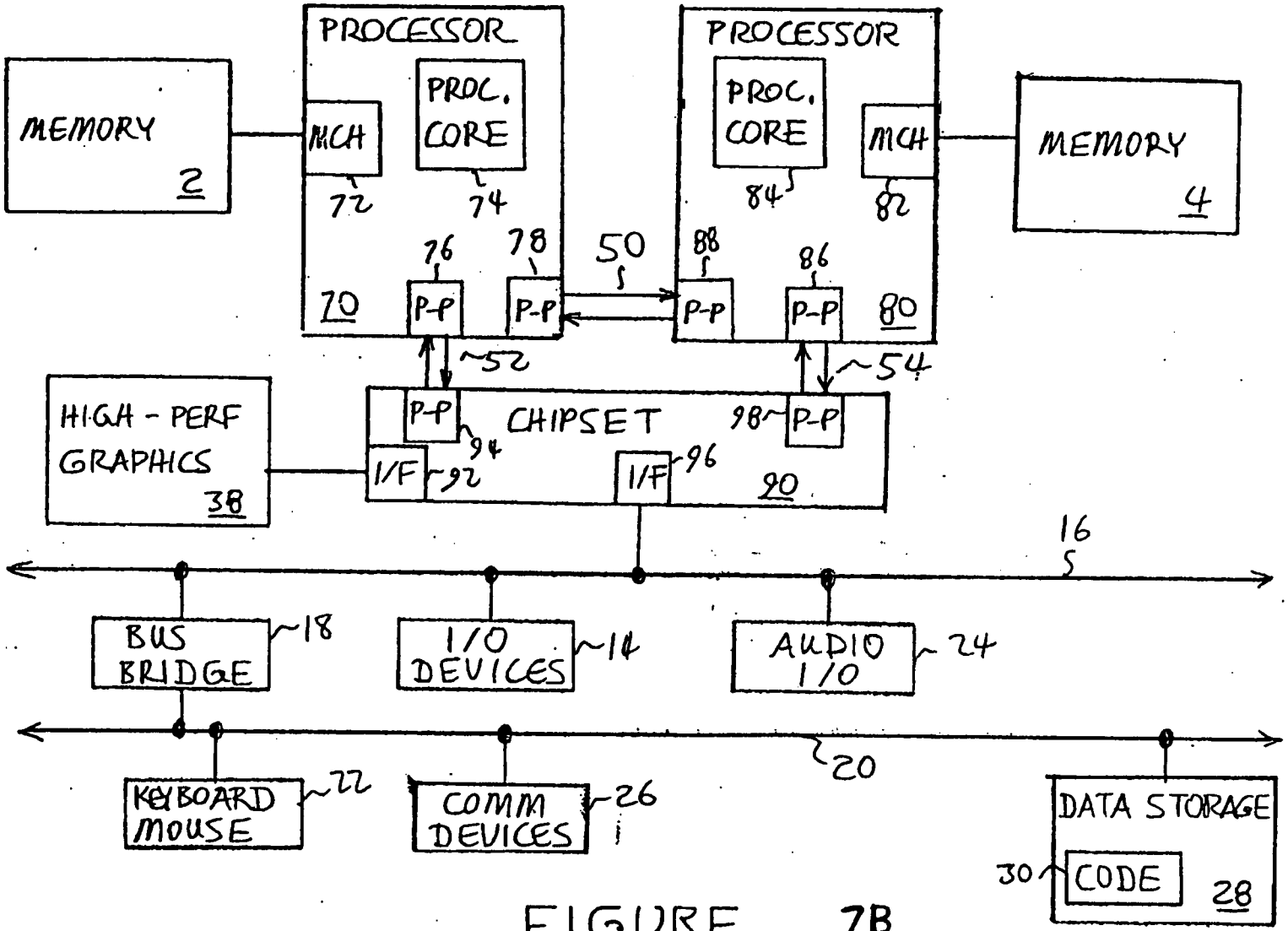

PROCESSOR
PROCESSOR
MEMORY
2
MCH
PROC. CORE
72
74
PROC. CORE
84
MCH
82
MEMORY
4
76
78
50
88
86
70
P-P
P-P
P-P
P-P
80
~52
~54
HIGH - PERF GRAPHICS
38
P-P
CHIPSET
98
P-P
94
I/F
92
I/F
96
90
16
BUS BRIDGE
18
I/O DEVICES
14
AUDIO I/O
24
20
KEYBOARD MOUSE
22
COMM DEVICES
26
DATA STORAGE
30
CODE
28

FIGURE 7B